



Department of Energy
Carlsbad Field Office
P. O. Box 3090
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MAR 25 2004



ENTERED



Mr. Frank Marcinowski
Office of Radiation and Indoor Air
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Mr. Marcinowski:

In August 2003, the Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) completed discussions regarding the program policy and implementation methods for the management of alpha activity concentration within transuranic waste streams (i.e., payload management). The policy for payload management of transuranic waste agreed upon by the EPA and DOE is set out in the following letters:

- 1) Letter to Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency) from Dr. Inés R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy), August 4, 2003.
- 2) Letter to Dr. Inés R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy) from Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environment Protection Agency), August 8, 2003.

In order to clearly communicate the policy and implementation practices to the generator sites, the DOE has developed of a new appendix for inclusion in the Contact-Handled Transuranic Waste Acceptance Criteria (CH-WAC) (DOE/WIPP-02-3122). DOE believes that this appendix (Appendix E) is consistent with and incorporates all of the applicable requirements pertaining to payload management identified in the two letters establishing the policy.

Since this appendix reflects the agreement reached between the DOE and the EPA, the DOE requests that the EPA review and concur with the proposed CH-WAC Appendix E. The DOE will not include Appendix E in the CH-WAC until EPA concurrence is received.

If you have any questions, please contact Mr. Kerry Watson at (505) 234-7357 or Mr. Reinhard Knerr at (505) 234-7374.

Sincerely,

R. Paul Detwiler
Acting Manager

Enclosure



Mr. Frank Marcinowski

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MAR 25 2004

cc: w/enclosure

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APPENDIX E

Payload Management of TRU Alpha Activity Concentration

Scope

The policies and methods for the management of TRU alpha activity concentration within each TRU waste payload container disposed of at WIPP are set out below. They are based on the definition of TRU waste in the *Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act* (LWA), Public Law 102-579. The LWA defines TRU waste as:

“...waste containing more than 100 nanocuries of alpha emitting transuranic isotopes per gram of waste, with half lives greater than 20 years...” (Sec. 2(18))

This appendix pertains specifically to the payload management of TRU alpha activity concentration of waste containers selected for overpacking.

Policies

The National TRU Waste Program has established the following policies for managing TRU alpha activity concentration in compliance with the LWA: (References E1, E2, and E3)

The LWA TRU alpha activity concentration limit for TRU waste (>100 nCi/g) applies to the TRU waste stream as a whole.

Waste containers belonging to a TRU waste stream may vary in their TRU alpha activity concentration, some containing >100 nCi/g and some containing ≤ 100 nCi/g. Using process knowledge in combination with radioassay measurements to determine the presence of transuranic isotopes within the waste stream, generator sites define a TRU waste stream based on its potential to include waste containers with a TRU alpha activity concentration in excess of 100 nCi/g.

Waste containers belonging to the same TRU waste stream may be overpacked into a payload container (e.g., SWB or TDOP) provided that the TRU alpha activity concentration of the payload exceeds 100 nCi/g.

Prerequisites for Implementation

Each waste container selected for payload management must be part of the TRU waste stream identified in the acceptable knowledge summary report for that waste stream. (References E2 and E3)

Sites shall submit to the CBFO, for its review and approval, applicable plans and procedures for making TRU waste determinations based on payload management practices that involve the overpacking of waste containers. (Reference E2)

CBFO will notify EPA of sites seeking such authorization prior to CBFO's approval of a site to manage TRU alpha activity concentration using payload management. The WIPP will not accept payload managed waste for disposal until EPA has received notice. (Reference E3)

Implementation and Practice

Each TRU waste stream selected for payload management must include in its acceptable knowledge summary report an estimate of the total waste volume and the percentage of the waste volume that is above and below 100 nCi/g. (It should be noted that this information, although based on the best available AK information, is preliminary and subject to the performance of WIPP certified NDA measurements and cannot and will not be used as a measure of AK accuracy.) (Reference E3)

Each waste container selected for payload management must contain at least one TRU isotope (e.g., Pu²³⁸, Pu²³⁹, Pu²⁴⁰, Pu²⁴², etc.) whose activity exceeds the LLD of the radioassay system used to characterize the waste. (References E2 and E3)

Each waste container selected for payload management may only be overpacked into a payload container (e.g., SWB or TDOP) with other waste containers from the same TRU waste stream. (Reference E4)

The TRU alpha activity concentration of the payload container is determined according to section 3.3.3 of this document.

References

- E1 Public Law 102-579, 106 Stat.4777, 1992 (as amended by Public Law 104-201 1996). Waste Isolation Pilot Plant Land Withdrawal Act.

Letter to Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency) from Dr. Ines R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy), August 4, 2003.
- E3 Letter to Dr. Ines R. Triay (Manager, Carlsbad Field Office, U.S. Department of Energy) from Mr. Frank Marcinowski (Director, Office of Radiation and Indoor Air, U.S. Environment Protection Agency), August 8, 2003.
- E4 *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, NM4890139088-TSDF, New Mexico Environment Department, Santa Fe, New Mexico.